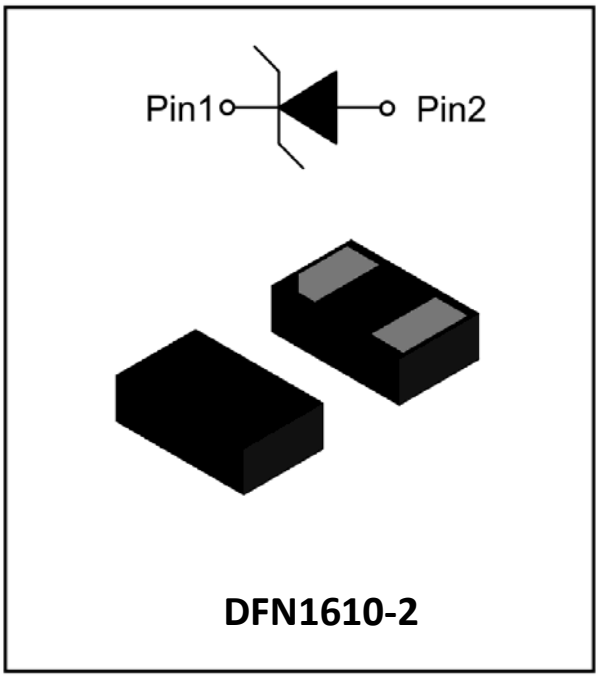
1-Line , Uni-directional , Transient Voltage Suppressor



Features

- Ultra small package
- Stand-off voltage: 24V
- Transient protection for each line according to
  IEC61000-4-2(ESD): ±30kV (contact)
  IEC61000-4-4 (EFT): 80A (5/50ns)
  IEC61000-4-5(surge):40A (8/20μs)
- Low clamping voltage
- RoHS Compliant

Applications

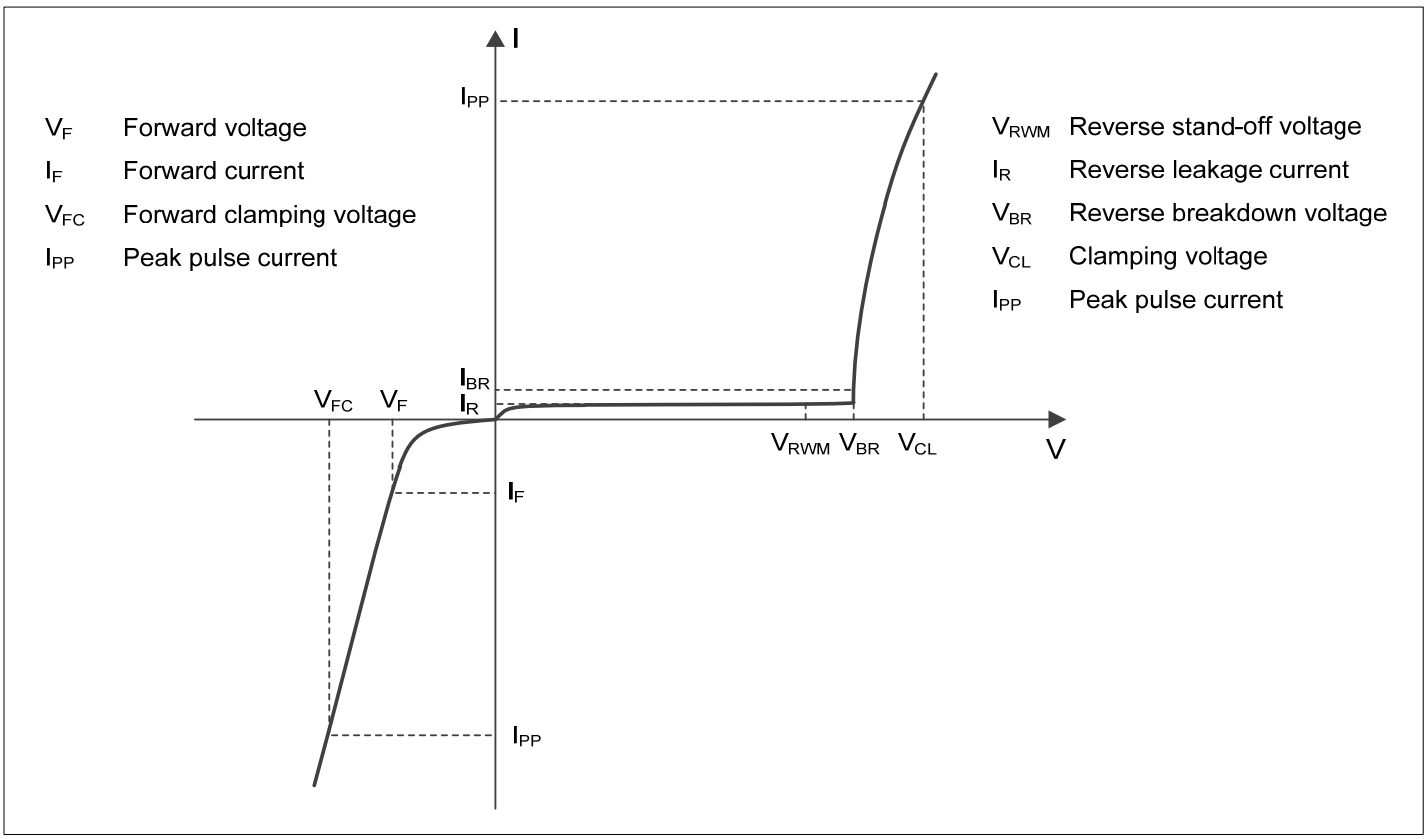
- Power supply protection
- Power management
- Battery Contacts

Mechanical Characteristics

- Package: DFN1610-2L
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Marking Information: See Below



■Definitions of electrical characteristics



■Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 8/20μs)	P_{pk}	1720	W
Peak pulse current (t_p = 8/20μs)	I_{PP}	40	A
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	kV
ESD according to IEC61000-4-2 contact discharge		±30	
Operating Temperature Range	T_J	-55~125	℃
Storage Temperature Range	T_{STG}	-55~150	℃

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	V_{RWM}	V				24
Reverse leakage current	I_R	μA	V_{RWM} = 24V			1
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	26.4		29
Forward voltage	V_F	V	I_F = 20mA	0.45		1.25
Clamping voltage [1)]	V_{CL}	V	I_{PP} = 40A, t_p = 8/20μs			43
Junction capacitance	C_J	pF	V_R = 0V, f = 1MHz		210	250

Notes:

(1). Non-repetitive current pulse, according to IEC61000-4-5. (8/20μs current waveform).

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESD24VP6A	F1	Approximate 270	3000	30000	120000	7” reel

■Typical Performance Characteristics (T_a=25℃ unless otherwise Specified)

Fig.1 8/20μs waveform per IEC61000-4-5

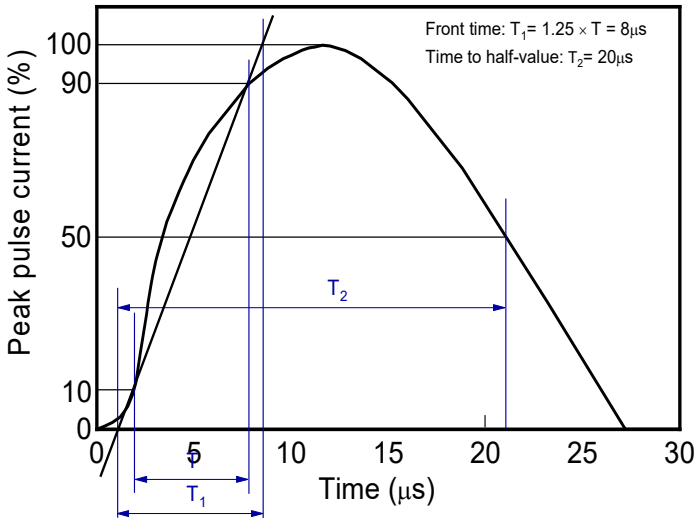


Fig.2 Contact discharge current waveform per IEC61000-4-2

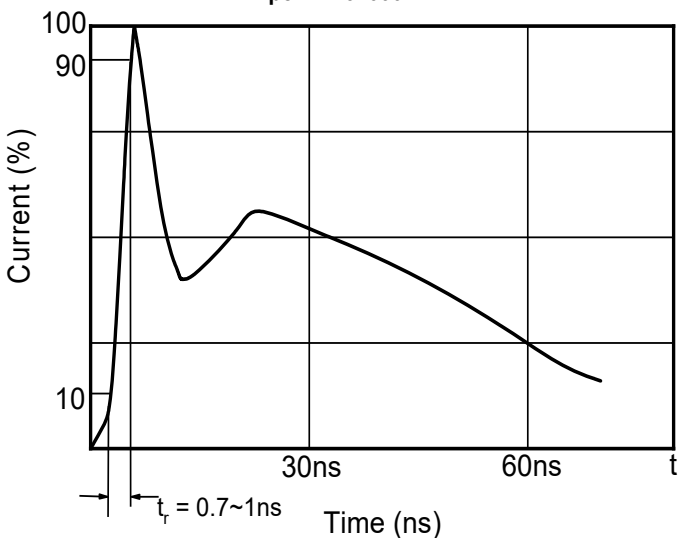


Fig.3 Clamping voltage vs. Peak pulse current

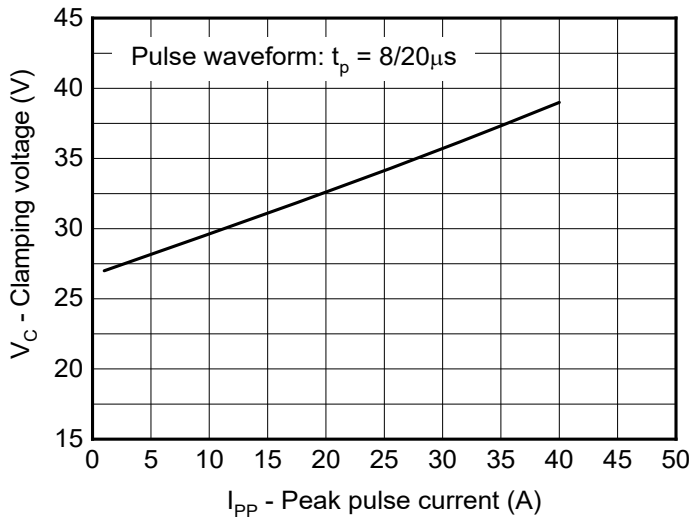


Fig.4 Non-repetitive peak pulse power vs. Pulse time

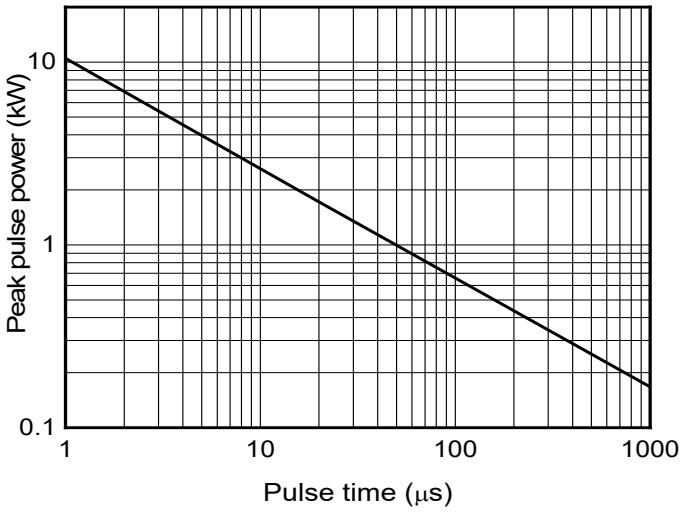
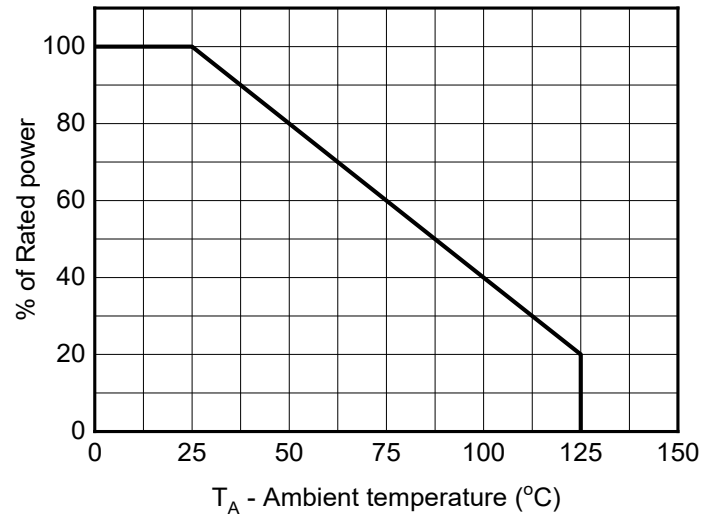
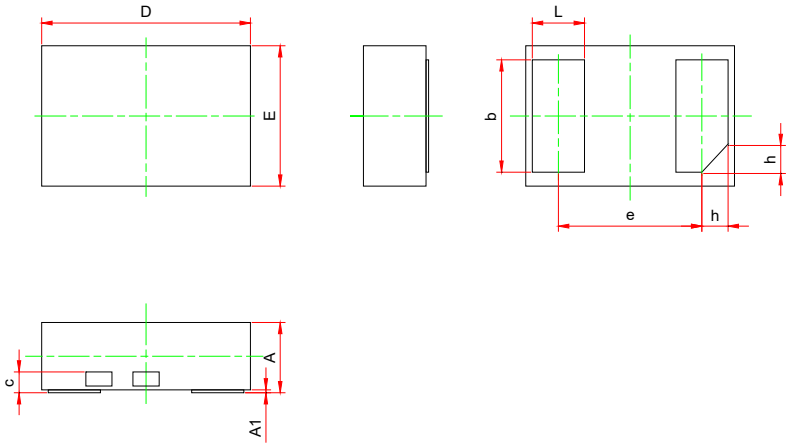


Fig.4 Power derating vs. Ambient temperature

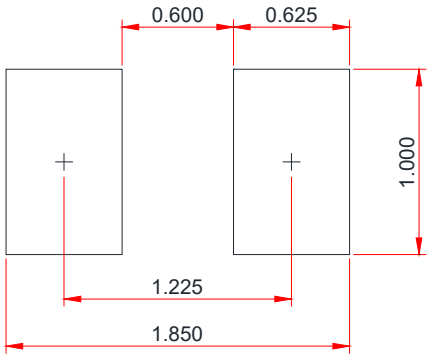


■Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0.00	0.02	0.05
c		0.15 Ref.	
b	0.75	0.80	0.85
L	0.35	0.40	0.45
D	1.55	1.60	1.65
E	0.95	1.00	1.05
e		1.10 BSC	
h		0.20 Ref.	

■Recommend land pattern (Unit:mm)



Notes:
This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.

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